Assessment Methodology – A Case Study and Results to Date for NRR

February, 1999

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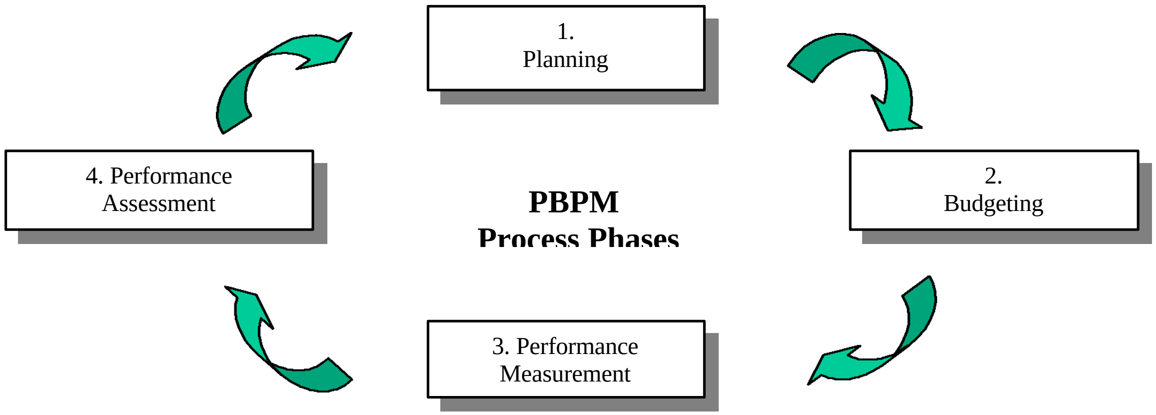
INTRODUCTION

Responding to the requirements of the Government Performance and Reporting (GPRA) and other changes in the external environment, the U.S. Nuclear Regulatory Commission (NRC) initiated several efforts aimed at conducting agency business more effectively and efficiently. One major effort entailed developing and implementing a Planning, Budgeting, and Performance Management Process (PBPM), comprised of four phases depicted in the illustration below:



In designing PBPM, NRC sought to create a disciplined, integrated process for planning, budgeting, and measuring performance where plans and expected outcomes defined the budget and performance measurement elements of the process. NRC also wanted the PBPM process to facilitate management and staff commitment to agency goals and effectively match resources to process requirements in a manner commensurate with the value added by the requirement.

In the year following implementation of the PBPM, the NRC hired Arthur Andersen to assess the PBPM framework and help the Office of Nuclear Reactor Regulation (NRR) pilot test the new planning cycle at the business unit level, incorporating any recommended augmentations resulting from Arthur Andersen's PBPM assessment.

As Arthur Andersen began its top-down planning and assessment work with NRR, a number of environmental factors reinforced the urgency for substantively improving the effectiveness and efficiency of current operations at NRR. First, the NRC initiated organizational changes in an effort to increase the managerial span of control to achieve an 1:8 ratio. In addition to organizational restructuring, NRR responded quickly to stakeholders' interests in reducing unnecessary licensee regulatory burden, like Requests for Additional Information (RAI), a visible component of the licensing action process. In efforts to both enhance safety and reduce unnecessary regulatory burden on licensees, the NRR also began revising its oversight program by risk-informing inspection processes and tying levels of regulatory oversight to levels of plant performance.

These environmental factors highlighted the need for strengthened strategic management and planning practices in order to help NRR leaders address fluctuations in the external environment and successfully complete on-going internal initiatives.

The need for better planning and stronger strategic management informed the design and implementation of the NRR effectiveness and efficiency assessments. The following report is the result of Arthur Andersen's Effectiveness and Efficiency Assessment of the Office of Nuclear Reactor Regulation (NRR). It is comprised of three chapters:

- **Chapter I. Effectiveness Assessment**
  The Effectiveness chapter addresses the question of "what is the right work for accomplishing NRR's desired outcomes?" The question is answered in this chapter through a presentation of the outcome goals and success criteria developed through the collaborative efforts of Arthur Andersen and NRR's Executive Team. The desired outcomes informed decisions about the work needed to accomplish these goals. In this chapter, the key focus is on the organizational change in perspective, moving from output based operations to managing for outcomes.

- **Chapter II. Efficiency Assessment**
  The Efficiency Chapter addresses the question of "how does the NRR do the work right." This question is answered through an analysis of two main sources/issues of work, Licensing Actions and general workload management practices. The assessment consists of an analysis of current work processes, with information gathered through interviews and focus groups, both for licensing actions and workload management. This chapter identifies areas for improvement in key business processes. Industry best practices provided strong support for the recommendations and efficiency improvement themes developed for NRR in this chapter.

- **Chapter III. Operating Plan**
  This chapter brings together and implements the recommendations for enhancing effectiveness and efficiency, as they relate to performance management practices, into an Operating plan for NRR. The focus of this chapter is aiding NRR in its transition from output based to outcome based operations through an Operating Plan for implementation.

In addition, Appendices A-I provide detailed information, such as observations and best practices regarding each of the three chapters.

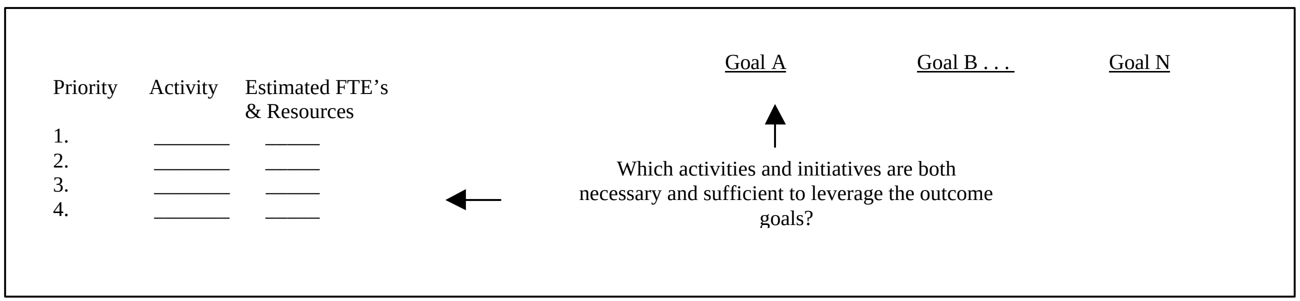
CHAPTER I. EFFECTIVENESS STUDY

SECTION 1: INTRODUCTION

This section of the report describes the effectiveness component of the NRR programmatic assessment – the NRR's Executive Team's top-down review of the organization. This review was conducted for the purposes of identifying and prioritizing the activities and initiatives critical to achieving NRR's strategic outcomes.

Figure A depicts the basic template used as the model for the final effectiveness assessment product.

Figure A: Effectiveness Template



Essentially, the template captures the following information:

- NRR's measurable outcomes
- Prioritized lists of new initiatives and current activities critical for achieving each of NRR's desired outcomes
- Resource estimates for each initiative and activity
- A prioritized list of activities, including identification of activities recommended for sun setting because they do not leverage outcomes.

The output of this assessment is a populated "effectiveness template" that conveys a common understanding of the NRR activities and initiatives believed to be both necessary and sufficient for achieving the organization's desired outcomes – information that becomes the basis for NRR's operating plan.

The assessment was executed through a series of structured work sessions with the NRR Executive Team. The scope of the methodology included working with the Executive Team to first identify NRR's desired outcomes. Outcomes were defined as the measurable successes achieved as a result of executing specific activities and initiatives. Once the Executive Team identified, prioritized and determined change vectors of its desired outcomes, members then identified and prioritized the activities and initiatives essential to delivering NRR's desired outcomes. The final list of initiatives and activities also identifies current efforts less critical for leveraging NRR's desired outcomes, and the associated resources. The assessment process used by the Executive Team to conduct the assessment is described more fully in the following section.

SECTION II. METHODOLOGY

This section describes the effectiveness assessment methodology used at NRR to develop:

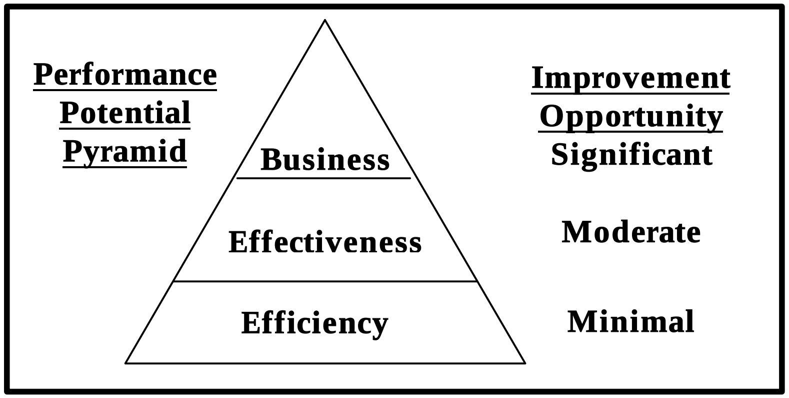
- NRR's measurable outcomes (starting with goal areas and the change vectors for each goal area)
- A prioritized list of initiatives and activities critical for achieving the outcomes
- Resource estimates for each initiatives and activities, and
- Recommendations for sun setting activities that do not leverage outcomes.

Information resulting from the effectiveness assessment comprises the backbone of a new operating plan design, discussed in Chapter 4 of this report. The remainder of this section describes the approach and assumptions upon which the effectiveness assessment methodology is predicated, and a description of how the methodology was executed at NRR.

Effectiveness Study Philosophy and Assumptions

- Effectiveness assessments are designed to help identify the "work" (ie: programs, initiatives, services) most critical to helping an organization meet its goals. Based on experience, we have observed that focusing on the work that most directly aids attainment of identified outcomes enables organizations to better optimize leverage resources and better utilize time, money, staff, etc.

Figure B: Performance Potential Pyramid

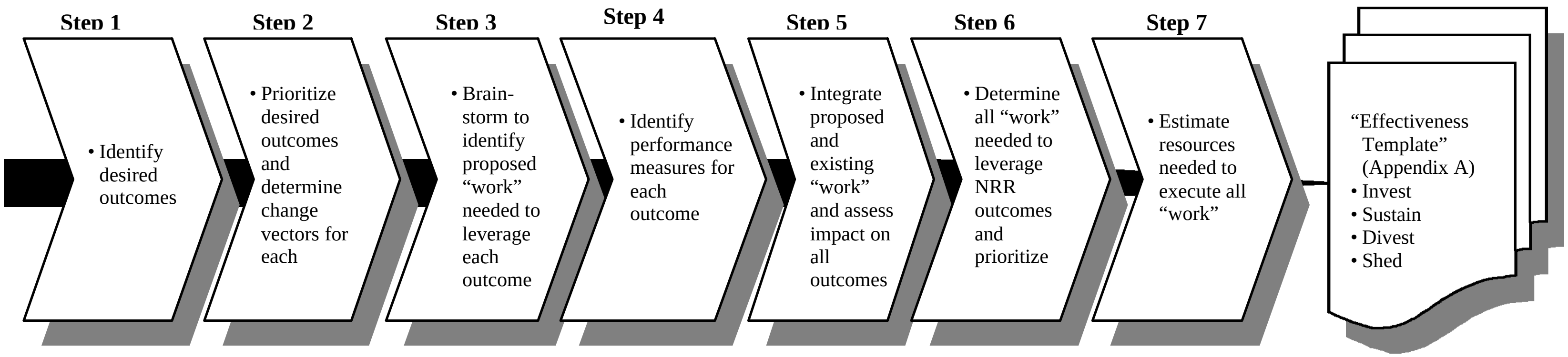


- The effectiveness assessment methodology used at NRR is designed to define the outcome goals as the first step in shifting organizational focus towards managing for results (if the outcomes are not already clearly defined).
- Clearly articulated and measurable outcomes provide the basis for assessing the relative value of work in leveraging organizational goals -- Arthur Andersen's approach to conducting top-down program assessments rests on establishing clarity about the desired outcomes. The desired outcomes, expressed in measurable terms, provide the context for assessing the appropriateness of specific programs, activities and initiatives.
- Necessary and sufficient are the two criteria used to determine the appropriateness of specific programs and initiatives in helping an organization leverage resources against it's desired outcomes. The methodology identifies first what work is necessary to accomplish the outcomes. Following identification of all the necessary work, prioritization techniques are then used to estimate how much of the necessary work would be sufficient to accomplish the desired outcomes. Best practice research indicates that managing the critical few with excellence provides greater benefit than trying to do everything at once.
- Given the strategic nature of an effectiveness study, it is essential that organizational leaders stay intimately involved in executing the assessment methodology. Indeed, best practices indicate that organizational leaders must be very involved in developing the design and substance of organizational strategies. Successful execution of the effectiveness assessment methodology relies on significant participation by the highest level executives. Sustained leadership involvement helps ensure alignment on directional decisions. This is vital to building unity and consistency in leadership expectations.
- Work session designs relied on the assumption that starting exercises with blank sheets of paper would help prevent current commitments from hindering creativity and the identification of highly innovative opportunities. For example, NRC has a strategic plan that includes measurable goals for nuclear reactor plants. Part of the value derived by participants in the work sessions resulted from the freedom to think in ways unfettered by current conventions.

Process and Tools

- **Methodology –** The effectiveness methodology is comprised of seven key steps, which are described in more detail below. The description accompanying the graphic describes the design of each step and the relationships between step -- each major step builds on the results of the previous step. The section entitled "Process Implementation Description," describes the Executive Team's experiences in working through the effectiveness assessment methodology. A later section of this chapter describes our observations and the lessons learned as the Executive Team executed the methodology.
- **Process facilitation and coaching, & work session design --** Arthur Andersen provided facilitation, process coaching and structured work session design services. Work sessions were designed for NRR's Executive Team and occurred on a periodic basis – most sessions were between two and three hours long and occurred every three to five weeks. One working session was a daylong off-site attended by other NRC offices and NRR Division Directors, in addition to the NRR Executive Team.

Figure B: Overview of Effectiveness Methodology



Methodology Step Descriptions: Purposes and Outcomes

- **Step One** – identify possible outcomes for NRR. A list of all outcomes developed during this step provides a discussion tool for building consensus about the most desirable and the appropriate change vectors in Step Two.
- **Step Two** – prioritize the desired outcomes and determine change vectors. Identifying the degree of change associated with the desired outcomes enables clearer understanding of how much work is required to meet the desired outcomes.
- **Step Three** – identify proposed "work" needed to leverage each desired outcome. Lists of potential activities are developed for each desired outcome. Taking a "clean sheet" approach to identifying all the possible work aids identification of relatively more unconventional means of accomplishing the desired outcomes. Each initiative is then analyzed to determine the relationship between implementation time and the expected return on investment. This step enables identification of the potential of each initiative to contribute towards leveraging particular outcomes.
- **Step Four** – identify performance measures for each desired outcome. This step enables clearer understanding of what the successful attainment of outcomes should produce. It also sharpens understanding of the degree of change required to achieve the desired outcomes (ie: increase staff productivity by 10% versus 60%) thereby helping to finalize which initiatives and activities are essential for meeting performance targets specified by the outcome metrics.
- **Step Five** – integrate proposed and existing work, and assess impact on all outcomes. If separate lists of initiatives are developed for each outcome, an integration exercise is needed as a means of assessing the impact of initiatives intended to leverage one outcome on the other desired outcomes, and weeding out redundancies. Such an integration exercise addresses the risk of potential adverse impacts of initiatives and activities designed to leverage a specific outcome on the remaining outcomes (ie: the risk of reworking NRR's role in plant shutdowns, intended to reduce unnecessary licensee regulatory burden, on safety or public

confidence). The impact analysis also facilitates identification of the activities and initiatives with the highest positive impact on the desired outcomes.

- **Step Six** – determine and prioritize those activities and initiatives needed to leverage NRR outcomes. Outcome metrics, along with performance targets, guide determination of the final list of initiatives and activities essential for achieving the outcomes. The impact analysis conducted in Step Four aids prioritization by highlighting the relationship between specific initiatives/activities and all the outcomes. Activities that contribute little towards the desired outcomes are also identified during this step.
- **Step Seven** – determine resources needed to execute the critical initiatives and activities. Items on the list of "work" identified in Step Six must then be allocated sufficient resources to attain those performance targets specified in the outcome metrics.
- **Output – The "Effectiveness Template"** – examples of the design for the "effectiveness template" can be found in Appendix A: the Effectiveness Template, referenced earlier in this Chapter. The template captures NRR's desired outcomes, performance measures describing success in meeting the outcomes, and a prioritized, resource loaded list of activities and initiatives identifying those necessary and sufficient for achieving NRR's desired outcomes – this prioritized list indicates clearly which activities will be undertaken and which are recommended for sun-setting. Essentially, the effectiveness template provides the NRR Executive Team with the raw materials for a new Operating Plan design to help drive progress towards desired outcomes.

Methodology Implementation Description

This section describes how the above methodology was implemented:

- **Step One –** The Executive Team began its work on the effectiveness assessment in July 1998 with training designed to provide an understanding of the effectiveness assessment methodology, and build an understanding of, and consensus for, the objectives of the assessment. The Executive Team then brainstormed to identify desired outcomes for NRR. The output was a list of four primary outcome areas for NRR:
    - ✓ Maintaining Safety
    - ✓ Unnecessary regulatory burden
    - ✓ Public confidence; and
    - ✓ Internal effectiveness and efficiency.

- **Step Two -** In August, the Executive Team prioritized the four outcome areas identified in July. The Executive Team also determined change vectors for each outcome:
    - ✓ Maintaining current safety margins
    - ✓ Reducing unnecessary regulatory burden
    - ✓ Increasing public confidence
    - ✓ Increasing internal effectiveness and efficiency.

The degree of change was intended to help the Executive Team determine which, and how many, initiatives and activities were necessary to achieve each outcome. For example, if the vector for internal efficiency and effectiveness is "to significantly increase" versus "moderately increase," relatively more effort or creativity is required to attain the desired outcome. The absence of reliable baseline information precluded development of measurable outcomes at this stage of the assessment. Appendix B: ET Effectiveness Assessment Briefing 12/9/98, graphically depicts the evolution of NRR's desired outcomes.

- **Step Three** - During September, the Executive Team brainstormed to identify new or on-going initiatives that would have the greatest impact on each outcome. Separate lists of initiatives were developed for each of the three outcomes where the change vectors indicated the need for substantive improvements, ie: increase public confidence. A list of new initiatives for "maintaining safety" was not developed because the vector "maintain" requires little work in addition to the significant existing initiatives already underway[1]. The Executive Team then analyzed each activity/initiative to determine its relative potential for contributing to the outcome over a three-year time horizon. Identification, analysis and prioritization of activities/initiatives identified as key levers towards meeting each outcome continued through November. See Appendix B: ET Effectiveness Assessment Briefing 12/9/98, of results from Steps One through Three.

- **Steps Four through Six** -- In early December, the Executive Team, NRR Division Directors and other NRC Office staff, participated in an all-day session during which they embarked on Process Steps Four through Six. Each step is discussed separately.
  - ✓ **Step Four:** The group began by developing draft metrics for each outcome. The draft metrics were intended to enable the group to refine their understanding of which activities were critical to achieving the desired outcomes.
  - ✓ **Step Five:** With more specific performance targets for each outcome in mind, three teams each culled through each list of initiatives, selecting the five most critical to ensuring the improvement in each of the three outcome areas, except safety (where current efforts were determined to be sufficient). Each short-listed initiative was then evaluated to determine its impact on the other outcome areas (ie: the impact of policy prescribing NRC's role in plant shut-downs, an initiative designed to reduce unnecessary regulatory burden, on safety or internal effectiveness and efficiency). This systemic evaluation of the initiatives then provided a basis for ensuring a balanced, comprehensive list of initiatives, and early identification of possible risks posed by an initiative associated with one outcome on the remaining three outcomes.
  - ✓ **Step Six:** The Executive Team then used the impact analysis developed during Step Five to help them make informed decisions in consolidating the three lists of critical initiatives into a single, prioritized list of 5-8 items. See Appendix C: Effectiveness Template Two, a document developed during the Kentlands Manor off-site retreat. Also identified were existing activities with minimal or low potential for helping NRR achieve its desired outcomes. In a resource-constrained environment, these low leverage activities are potential candidates for sun setting. Appendix C identifies a preliminary

[1] In fact, the Executive Team determined during Step 2 that there may be excess margins in current efforts expended in the interests of improving safety.

prioritization of current activities based on opinion rather than formal study. The Executive Team has not finalized their prioritized list of activities – therefore, the list in Appendix C should be used only as an aid to understanding the methodology, not as the final proposed list.

- **Steps Five through Seven** – Currently the Executive Team is finalizing the populated effectiveness template by reviewing and revising the list and priority of initiatives and activities. The Executive Team is also finalizing the outcome metrics (See Appendix D: Draft Outcome Metrics) and the list of new initiatives, identifying resource requirements for each new initiative, and determining how resources will be allocated among existing programs and activities. Current plans are to complete these steps by the end of March 1999.

Execution of the methodology differed somewhat from the initial design for many reasons. Valuable lessons were learned during the implementation of the assessment methodology. These lessons can help strengthen the methodology and facilitate execution of its steps. The lessons learned from implementing the effectiveness assessment methodology at NRR are sorted into the following four topics:

- Methodology - process and concept complexities
- Implications for NRR culture – values and behaviors
- Level of effort
- Participation from additional staff within NRR and from other NRC offices.

These items are discussed in more detail in the following section summarizing Arthur Andersen's observations and the lessons learned during the NRR effectiveness review. Specific observations and lessons learned then inform the recommended next steps for the Executive Team, and for NRC in general, as it completes the effectiveness assessment and prepares to use the methodology in other offices.

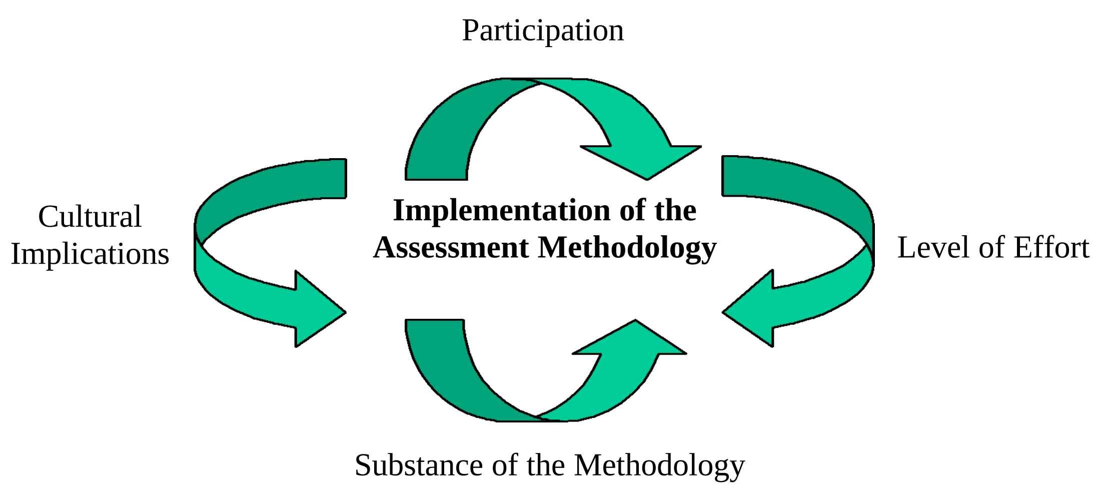
SECTION III. OBSERVATIONS AND LESSONS LEARNED

During the implementation of the effectiveness assessment methodology, Arthur Andersen staff had the opportunity to make several observations. These observations are organized into the following four themes:

- Methodology - process and concept complexities
- Implications for NRR culture – values and behaviors
- Level of effort
- Participation from additional staff within NRR and from other NRC offices

These four themes interrelate. For example, some methodological concepts challenge some aspects of NRR's culture. Because the NRR Executive Team engaged in implementing the methodology at a more profound level than originally anticipated, decreasing the implementation pace became desirable. Decreasing the pace allowed the Executive Team to internalize the methodology, and more quickly and consistently exhibit outcome based behaviors in the course of conducting routine business, apart from their assessment work.

Figure C: Interrelated impacts on implementation of the assessment methodology.



It was initially anticipated that the Executive Team would use the methodology as an exercise to identify the value contributed by specific work in leveraging the desired outcomes. The Executive Team's profound level of engagement with the methodology and ensuing behavioral changes were very positive and indicate outcome based values. The Executive Team's willingness to learn new behaviors required supplemental group and individual coaching. This eagerness to learn more may have limited to some extent the efficiency of the process but it indicates great promise for the methodology in helping receptive leaders move towards managing for outcomes.

The following are observations and lessons learned during the implementation of the effectiveness assessment methodology. Lessons learned during the effectiveness assessment offer alternative strategies and tactics, where practicable, for increasing the effectiveness of the methodology and increasing the efficiency of the model's implementation.

Substance of the methodology: the methodology contained concepts that were unfamiliar to some participants, or challenged existing organizational values and beliefs. The following observations describing participant interactions with the methodology and lessons learned from those interactions:

- Executive Team members proved very willing to engage in intellectual discussions about methodological concepts, successfully resisting the temptation to react negatively to powerful cultural implications posed by the concept in favor of understanding intellectual merits first. Their intellectual curiosity facilitated progressive discussions and helped them better use their insights from working with the methodology.
- At the effectiveness assessment methodology's core lies the concept of managing for outcomes. As the Executive Team implemented the assessment methodology, they grappled with the implications of this concept versus more traditional NRR management practices. Accepting the concept required group and individual coaching. Coaching helped participants maintain clear distinctions between outputs and outcomes, and visualize concrete ways of applying the concept to more effectively manage the organization.
- While performance measures were familiar in concept, some participants had little experience with the design and assessment of performance measures. Specific training on developing performance metrics may have increased participants' comfort levels with designing and finalizing appropriate metrics.
- Strategic/outcome level success metrics were developed after the Executive Team identified lists of proposed initiatives for each outcome. Guided by specific outcome level success measures during the identification of proposed initiatives may have produced different results by helping the Team more quickly sort through and determine the criticality of specific initiatives.
- Using the methodology successfully requires identifying "only those activities necessary and sufficient to leverage the outcomes" rather than "justifying how all the things we do contribute to meeting our outcomes." Participants made this leap in thinking successfully when they adopted a "blank sheet of paper" approach and were encouraged to think unconventionally during facilitated work sessions.

Cultural implications associated with use of the Methodology: many participants found the cultural implications of some methodological concepts thought provoking and at odds with the existing culture. The following observations describe cultural challenges that must be anticipated in order to successfully execute the methodology and implement the assessment results:

- The assessment methodology must explicitly confront prevailing beliefs about performance measurement in order to be effective. First, willingness to assume responsibility for outcomes not totally within NRR's control was understandably difficult for some participants. Willingness to assume responsibility increased when participants began to view performance measures as drivers of desired behaviors, rather than simple numerical indicators of performance. Second, many participants expressed concern about the use of performance measurement data as a rationale for punitive action, especially from other parts of the NRC. The Executive Team began to feel more at ease when strategies for educating and managing possible negative responses from the rest of the organization were discussed. The Executive Team will have to spend much time setting expectations and educating others in the organization about their implementation plans.
- NRR's culture esteems perfection. At times, the Executive Team struggled with the notion of "satisficing" – embracing the 80/20 principle where good enough is acceptable for the time being. Striving for perfection sometimes hindered the ability to achieve closure and advance the implementation process. Process checks and more active facilitation were often sufficient to sustain forward momentum.
- There is a tendency within NRR to strive for consensus before finalizing decisions. While developing consensus among the Executive Team on major issues affecting the whole organization is vital to effective management of NRR, expending efforts to develop consensus around strategic options can be counter-productive. This should not be confused with soliciting diverse perspectives, which often strengthens a proposed course of action.
- In top-down assessments, leadership's responsibility is clarifying goals and setting direction. During the assessment, the Executive Team became much more adept at defining desired outcomes, articulating design parameters and other boundary conditions, and assigning responsibility for the design of products to staff participants. The Team learned that strategic management is as important as solving daily problems in determining their success as leaders. Maintaining the NRR Executive Team's ability to "stay out of the weeds" and manage at the right level will help ensure the successful transition to managing for outcomes.

Level of Effort: time schedules for implementing the methodology were underestimated. Inaccurate estimations of the workload associated with executing the methodology on the Executive Team and supporting staff were a result of the following:

- The assessment methodology requires a top-down approach. The investment of leadership's time is a critical determinant of success in conducting strategic assessments. While the Executive Team proved very willing to dedicate time to this effort, coordinating busy schedules hindered the efficiency of the process.
- Executive Team members have hectic schedules, a factor that hindered consistent participation. Additional time to re-orient participants with the methodology and bring them up-to-date on progress made during previous meetings was an obstacle to efficiency. In a culture that favors consensus-based decision-making, the effect of absentee group members was amplified. As

Team members increasingly view strategic management as a more significant component of their routine work, attendance should become more consistent.

- As discussed earlier, decision-making at NRR is frequently consensus based. This sometimes delayed decisions, and necessitated an iterative approach to developing work products. Given the magnitude of the changes currently underway at NRR and the far-reaching implications of this assessment, the current emphasis on building consensus and ensuring maximum comfort levels is probably appropriate. However, as this assessment process is institutionalized, and the Executive Team becomes more adept at executing it, the number of issues identified as requiring consensus decisions should decrease.
- Mental "soaking" time between work sessions, supplemented by one-on-one coaching, helped the Executive Team better understand unfamiliar concepts and come to terms with the cultural implications raised by some of the methodology's concepts.

Participation: as a top-down assessment, the work sessions for executing the methodology were originally designed for Executive Team participation. The following accommodations were required as a means of enabling participation of additional staff from within NRR and other NRC Offices:

- The cultural importance of gaining consensus before decision making sometimes brought additional players into the process. The effect of bringing additional staff (from both NRR and other NRC groups) into the process slowed decision making on some issues as additional players required training and were then encouraged to bring their diverse perspectives into discussions and decision making. However, additional perspectives often strengthened the quality of final products.
- Underestimating the time required of the Executive team necessitated effort from additional NRR staff to complete work steps in a timely manner. A Planning Group was assembled to help draft specific work products for discussion and review by the Executive Team. Such work products included populated planning models for the NRR operating plan (See Appendix G). Extra training time was required to bring Planning Group members up-to-date. The Planning Group members were able to quickly grasp the methodology and develop drafts for discussion during Executive Team meetings. While their participation has been invaluable to both the effectiveness and efficiency of the process, their role must continue to be consciously circumscribed.
- During the assessment, staff from other offices received standing invitations to attend and participate in work sessions with the NRR Executive Team. Their perspective often added tremendous value in the form of enhanced quality and vigorous debate but did impact overall progress in executing the methodology.

None of these observations and lessons learned prescribe a major overhaul of the methodology. Rather, the observations suggest that certain augmentations are appropriate for more effective and efficient implementation of the assessment methodology. These methodological upgrades, along with recommended next steps in other related areas, are described in the following section.

SECTION IV. RECOMMENDED NEXT STEPS

Finishing the assessment - The following steps have not been fully executed:

- The list of outcome metrics remains unfinished. Specifically, final metrics are needed for two outcomes: "meeting NRC's safety mission" and "increasing public confidence."
- A final list of initiatives and activities – the Executive Team has determined which new initiative they will undertake in the coming year. They have not, however, finalized the list of existing activities – which will be maintained and which will be shed.
- Resource determinations for existing activities have not been completed. Analysis of the resources for those activities that will be shed must also be completed. This will help determine the resources available for new initiatives.

Adjusting delivery of the effectiveness assessment methodology – while the basic framework of the methodology is sound, lessons learned as a result of executing the methodology with the NRR Executive Team have implications for the delivery and pacing of the work sessions. Specific recommendations for altering the methodology include the following:

- More up-front training and process coaching in performance measurement. While the concepts are familiar to many, some of the underlying philosophies and beliefs driving performance measurement systems require more emphasis earlier in the process.
- More discussion earlier in the methodology about the cultural implications posed by operationalizing the methodology and implementing the results of the effectiveness assessment.
- Less aggressive scheduling expectations for individual work sessions. Most sessions should last no longer than four hours – participants commonly feel drained towards the end of four-hour sessions. Additionally, significant "soak" time is needed between sessions, especially for those undergoing the process for the first time.
- More consistency in scheduling – work sessions should be scheduled with consistent time intervals between them. This establishes a regular rhythm for work efforts. Those undertaking the process for the first time should schedule two sessions per week, with each session lasting no more than four hours.
- Early assignment of a staff team to draft discussion products for work sessions of the Executive Team. It must be understood that the Executive Team is responsible for the substance of the work products through early and thorough guidance – the staff team should not assume responsibility for defending work products developed for the Executive Team work sessions.
- Commitment of the Executive Team to prioritize the effort in relationship to other work.
- Coaches should place emphasis on developing products that are "good enough" for now– work products are typically developed in iterations, and will be revisited in the spirit of continuous improvement.
- Less emphasis on gaining complete consensus for outputs. Facilitators should maintain group focus on building consensus for direction and the intent of processes

- Clearer role definition during work sessions for those from other NRC organizations.

Institutionalizing the assessment methodology – The Executive Team should assign responsibility for the long term implementation planning required to keep the initial assessment results up to date and relevant for the development of future operating plans:

- The Executive Team recognizes that this process is cyclical – the results of each annual effectiveness assessment will provide policy guidance to the Executive Council and the Commission, and planning guidance to NRR staff responsible for budget preparation. Planning should consider time needed to gain approval from the Executive Council and the Commission for policy guidance developed from the outcomes and their associated change vectors.
- Planning for the next cycle should include time to train process coaches charged with facilitating the Executive Team through future effectiveness assessment efforts.
- Planning should also include the specific assignment of responsibility for identifying and collecting the environmental data that will help the Executive Team make decisions about next year's desired outcomes. This includes performance reports for NRR, any work efforts with industry groups, intelligence from Congressional committee staff and other key stakeholders, etc.

Cultural challenges - There are several cultural challenges to address if the results of the assessment are to successfully inform business operations at NRR and NRC. The cultural challenges that the Executive Team should address include the following:

- Understanding the old values and consciousness about the extent to which they drive current business processes.
- Understanding what the new values need to be – and reconciling them with the old values and beliefs in effective communications and interactions with staff at all levels of the organization.
- Redefining roles in the new performance management paradigm.
- Ensuring the discipline to allocate the necessary time and resources to this process.
- Setting expectations and building support within the larger organization – especially at the Executive Council and Commission levels. Developing support from these NRC organizations will take on special significance as the Commission is confronted with changes in the way NRR conducts business and as a change in the Chairmanship occurs.

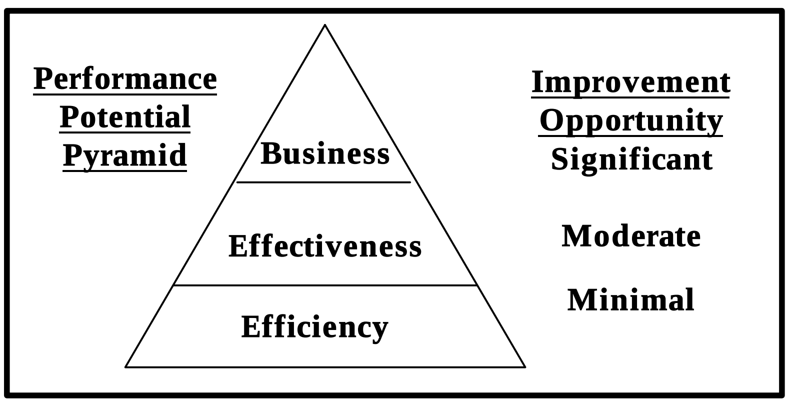
CHAPTER II. EFFICIENCY ASSESSMENT

SECTION I: INTRODUCTION

The purpose of this assessment is to provide a picture of current efficiency obstacles within NRR and a "toolkit" of immediate and longer-term actions that NRR can take to improve the efficiency of key business processes. It also highlights current initiatives that NRR has begun in efforts to become more efficient, and lessons learned for conducting future efficiency assessments.

This section constructs a context for the NRR efficiency assessment with respect to the Performance Potential Pyramid (Figure A). The diagram below depicts the context for NRR efficiency assessments, as they relate to Arthur Andersen's independent assessment of NRR's programs and operations. As explained in the Executive Summary, efficiency is the third component of the organizational assessment, and is represented at the bottom tier. Efficiency assessments question whether an organization is "doing the work *right*," as opposed to effectiveness assessments, which question whether an organization is "doing the *right* work."

Figure A: Performance Potential Pyramid



Originally, the overall approach for Arthur Andersen's independent assessment entailed reviewing two major business processes as a means of identifying opportunities to make operations better, faster and cheaper. Additionally, these efficiency assessments were intended to provide an opportunity to test and modify the proposed assessment methodology, and train selected NRR staff in conducting such assessments themselves.

The first business process that the Executive Team elected for assessment was Licensing Actions. Licensing Actions is a business area in which stakeholders had expressed great interest. It also seemed to be one area unlikely to diminish in importance as a result of the top-down effectiveness assessment. Specifically, interactions with industry cited Licensing Actions as a major source of unnecessary regulatory burden. Arthur Andersen conducted the first efficiency assessment, of Licensing Actions, from July through September, 1998.

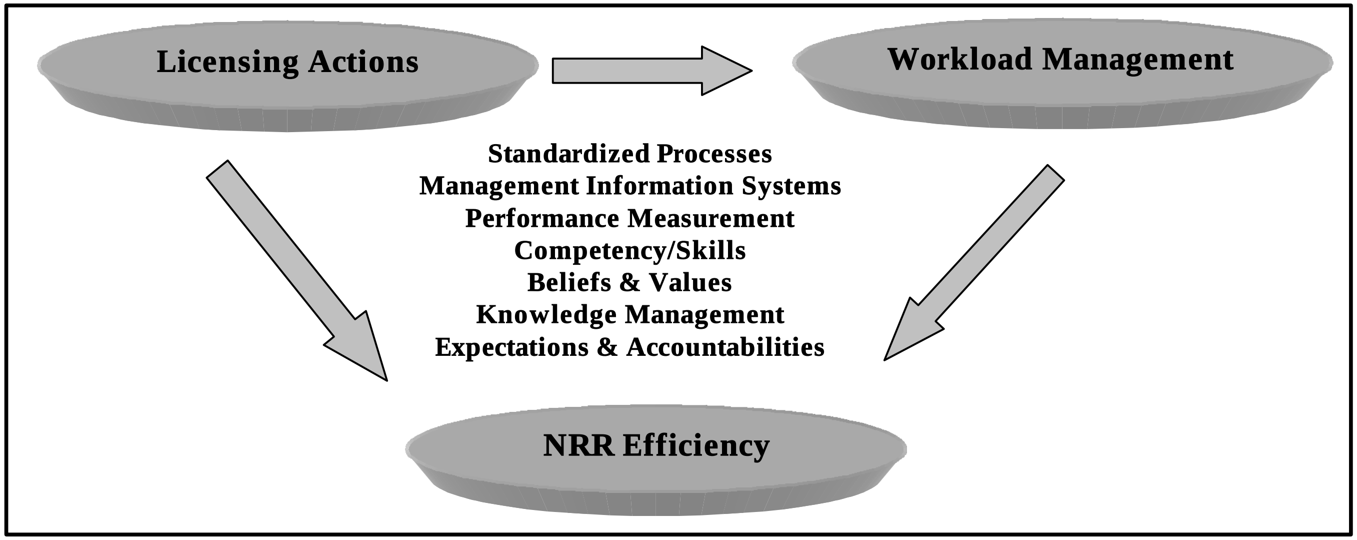
Draft recommendations for improving the efficiency of Licensing Actions were presented to the Executive Team in September 1998. Essentially, the recommendations stemmed from five key strategies built on best practices and business process redesign analysis. The full scope of recommendations for improving the efficiency of Licensing Actions can be found in Appendix E.

The recommendations resulting from the first efficiency assessment gave rise to the opportunity for a second efficiency assessment. The results of the study on Licensing Actions indicated a need to focus on current practices for prioritizing workload, distribution of workload, and workload tracking and completion at NRR.

Arthur Andersen began its assessment of workload management by initially focusing on workload prioritization. The Andersen team soon recognized that prioritizing workload was only one dimension of a larger process, workload management. Given this broader scope, the team systematically identified other barriers to efficient workload management. Draft recommendations were presented to the Executive Team on January 5, 1999.

Throughout both efficiency assessments, several efficiency improvement themes emerged - primarily from document reviews and staff and management interviews. These themes have provided an organizational structure for our observations and guided the development of report recommendations and next steps. The following graphic, Figure B, illustrates how these themes, which are listed in the center of the diagram, surfaced during the progression of NRR's efficiency assessment.

Figure B: Assessment Themes



While both assessments largely followed the same methodology, explained in detail in Section II, lessons learned in Section VII indicate a need for minor methodology modifications. Overall, this chapter describes the application of these themes in greater detail as they pertain to:

- Observations (Section III)
- Recommended Next Steps (Section IV)
- Implementation Challenges and Best Practices (Section V)
- Current Initiatives (Section VI)

SECTION II: METHODOLOGY

Since July 1998, Arthur Andersen has worked closely with NRR personnel in an effort to assess the efficiency of Licensing Actions and workload management processes and identify opportunities for process improvements. For the first assessment, NRR leadership identified Licensing Actions as the programmatic activity on which to perform an efficiency assessment. Licensing Actions are an important and visible component of NRR's total workload. Licensing Actions include:

- Issuance of licenses
- Amendments
- Exemptions
- Notices of enforcement and discretion
- Reliefs
- NRR originated orders

License amendments constitute approximately 60% of licensing action workload. Because license amendments comprise a significant portion of Licensing Actions, the first assessment generally focused on amendment processing. Specific objectives of the first efficiency assessment included:

- Helping NRR meet Licensing Actions performance targets
- Defining and designing best practices where appropriate
- Ensuring that Licensing Actions processes help NRR meet organizational goals like reducing unnecessary regulatory burden and increasing efficiency and effectiveness

Observations resulting from the first assessment on Licensing Actions indicated potential for greater efficiency in managing the flow of NRR's workload.

For the second assessment, NRR requested Arthur Andersen to focus on the area of workload prioritization. As the study progressed, Arthur Andersen identified workload prioritization as only one component shaping how work is managed at NRR. As a result, NRR was interested in gaining a broader understanding of how it manages its workload. Workload management describes how an organization manages its operations to produce outputs. The five broad components of workload management are:

- **Process - *How work gets accomplished*:** Includes how work is received, prioritized, allocated, distributed, tracked and completed and its supporting structures.

- **Tools - *How people are equipped to accomplish work:*** Includes all knowledge resources and information technology tools.

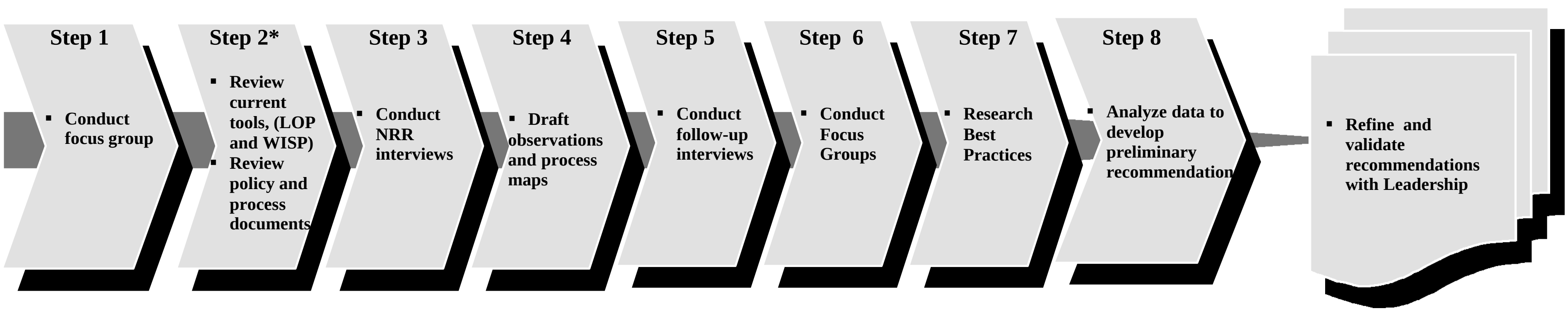
- **Skills - *The knowledge to better manage and complete the work:*** The ability of staff to manage workload based on training and experience.

- **Accountabilities & Expectations – *The extent to which formal and informal expectations exist and the depth of accountability for meeting these expectations*:** Applies to all levels of the organization, management, stakeholders, and staff and includes guidance from leadership.

- **Beliefs & Values – *How organizational culture informs workload management*:** The impact of beliefs and values regarding prioritization, relationships, safety, standardization, as well as the above four components of workload management on how effectively and efficiently work is managed.

Although the efficiency assessment focused on two different business processes - Licensing Actions and workload management - similar methodologies were used. The following graphic, Figure C, illustrates Arthur Andersen's overall assessment methodology.

Figure C: Efficiency Assessment Methodology



**Note: Step 2: Review of WISP and LOP applied to the Workload Management Assessment only.*

As shown in the graphic, Step 1 consisted of conducting an initial focus group to gather baseline observation data. In Step 2, we reviewed current workload management tools such as WISP, its system requirements, its replacement system RPS-LOP, and its project definition and analysis. In addition, we reviewed NRR office policy and process documentation, such as operating procedures, office letters, the Project Manager's Handbook and previous NRR studies.

Our primary data collection strategy, shown in Step 3, entailed conducting interviews with NRR management and staff. Through this effort, Arthur Andersen documented observations as well as process flows and procedures for Licensing Actions and workload management processes, as shown in Step 4. The process flows, illustrated in the Appendices, were further validated through follow-up interviews and focus groups with a cross-section of staff within NRR to ensure their accuracy, as shown in Steps 5 and 6.

Step 7 identified industry best practices. This involved reviewing workload and project management practices, automated workflow processes, and workload management tools and features compatible with NRR's business needs. The sources used included Arthur Andersen's proprietary *Global Best Practices* knowledge base, our internal GroupWare database *AA Online*, past NRR performance data, and internal Arthur Andersen expert interviews. Our study also included data from external benchmarking clearinghouses and databases, including the American Productivity and Quality Center and the Best Practices Center of Excellence. Best practices were used as the primary basis for developing recommendations.

Our final step, Step 8 consisted of analyzing the data collected and developing recommendations, which were later refined and "tested" with NRR personnel and management. The full text of the final assessments presented to the NRR Executive Team can be found in Appendix E and F.

SECTION III: OBSERVATIONS

The starting point for improving business processes is understanding current best practices. While best practices provide exemplary processes in both private sector companies and government agencies, they are useless without a thorough understanding of the issues they must address internally.

This section summarizes NRR staff and management's observations, made during the Licensing Actions and Workload Management Efficiency Assessments. These observations address efficiency issues at a broader level than those found in the Appendices. The observations are underpinned by details and examples from the Licensing Actions and Workload Management Assessments and apply to the organization as a whole, instead of individual business processes.

As described in Section II, Arthur Andersen reviewed literature such as office letters , handbooks, previous NRR studies, and conducted extensive interviews to create process maps for the Licensing Actions and workload management processes. After analyzing the data, we compiled observations about each business process. Detailed process observations and process maps can be found in Appendix E: Licensing Actions and Appendix F: Workload Management.

As mentioned in the Introduction, seven themes have emerged that significantly impact potential efficiency improvement at NRR. The following pages present the observations by the NRR focus groups facilitated by Arthur Andersen through each theme.

STANDARDIZED PROCESSES

- It is unclear to what extent NRR staff and management distinguish processes versus solving specific problems that merit unique solutions.
- Some individuals manage processes according to their own success criteria, in the absence of organizationally defined criteria.
- NRR leadership currently allows high levels of variability within business processes.

MANAGEMENT INFORMATION SYSTEMS

- Current technology, such as WISP and NUDOCS does not effectively support NRR's business needs. As a result, the use of personal tracking and management systems flourish, despite leadership's efforts to utilize WISP.
- NRR staff believes the current technology is outdated, does not fulfill their information requirements for managing work and processing Licensing Actions efficiently, and that data residing in such systems needs improvement.

PERFORMANCE MEASUREMENT

- An accurate, accessible, holistic view of NRR business processes and metrics regarding total and subtotal outputs and cycle times is unavailable to leadership and supervisors, which affects their ability to track work effectively.
- NRR has few formal tracking capabilities to monitor how well it serves its customers and the extent to which it practices its mission.

COMPETENCIES/SKILLS

- NRR staff and leadership do not consistently recognize who their internal and external customers are and what type of relationship to develop with them, thereby inhibiting communication and NRR's ability to fully leverage resources.
- While the degree of specialization within NRR allows NRR to complete customer requests, it also limits NRR supervisors from leveraging and assigning general work to specialists, despite their capability to perform it.

BELIEFS AND VALUES

- NRR staff perceive managing its business processes as primarily reactive instead of proactive.
- Staff members who are perceived to be more experienced or capable carry most of the challenging NRR workload.

KNOWLEDGE MANAGEMENT

- Lack of an accessible, accurate, central knowledge repository for precedents, plant technical specifications, and other plant licensing and inspection information provides incentive for staff and leadership to rely on personal networks for information.
- NRR's lack of formal knowledge sharing processes, such as mentoring, training, etc., threatens future organizational resources as experienced analysts and managers retire.
- Requests originating from NRR Regional Offices may be reduced through more formal information management and knowledge sharing.

EXPECTATIONS AND ACCOUNTABILITIES

- Leadership's expectations for middle management to "know everything" at any given moment interrupts more efficient information flow and distracts staff from completing requests within the estimated completion date.
- Business process expectations, as they pertain to scope and depth of answering requests, level of quality, and success criteria for customer satisfaction are vulnerable to individual interpretation and application.
- Skills and qualifications, such as technical expertise, cross-functional capabilities, interpersonal skills, business knowledge, or any combination thereof, appear to be inconsistently rewarded at NRR.
- NRR staff describe leadership's changing expectations as a "swinging pendulum" without formal mechanisms to readjust its ability to meet the expectations.

The observations in this section summarize the findings of the efficiency assessments. These findings are based primarily on interviews and Best Practices research. They identify NRR's opportunities for improvement in the efficiency of its business processes for Licensing Actions and Workload Management.

SECTION IV: RECOMMENDED NEXT STEPS

Analysis of the observations presented in Section III resulted in the following efficiency improvement themes. The themes emerged from observations relevant to both efficiency assessments. Each theme is linked to an expected outcome. The expected outcomes can be achieved by successfully implementing recommendations based on best practices. The seven themes and expected outcomes helped shape recommendations for both efficiency assessments conducted by Arthur Andersen.

Efficiency Improvement Theme	Expected Outcome
Standardized processes	Reduced process variability, clarification of process standards, improved consistency, introduction to best practices
Management Information Systems	Provides basis for improved decision-making, planning, and knowledge sharing
Performance Measurement	Reinforced expectations and enhanced accountability for clearly defined results
Competencies and Skills	Effective allocation of workload and full utilization and leverage of resources
Values and Beliefs	"Risk-informed regulation" and other approaches that yield NRR the outcomes it desires
Knowledge Management	Fully leverages NRR organizational experience and facilitates communication
Expectations and Accountabilities	Clear, measurable, performance expectations of staff and business units within NRR

The following section describes the recommendations and next steps towards improved efficiency. Recommendations and next steps result from observations and best practices gathered throughout the efficiency assessment. Next steps are initial processes that NRR can undertake to implement the recommendations. In order to improve agency wide business performance effectively and efficiently, and exceed GPRA requirements, it is imperative, at the very minimum, for NRR to address the observations in Section III as well as consider the following recommendations and next steps.

Many of the licensing action observations and recommendations from the detailed Licensing Action assessment, presented in Appendix A, are subsumed by the workload management recommendations by virtue of workload management's broader scope. Once the operations, responsibilities and process standards of the recommended Work Planning Center are clearly defined, many of NRR's business processes will be improved, including Licensing Actions. In addition, NRR has begun initiatives to address specific licensing action recommendations, such as the RAI task force. The following recommendations and next steps reflect NRR initiatives and workload management recommendations.

RECOMMENDATION: Improve the efficiency with which Licensing Actions and other key business areas are processed.

NEXT STEPS:

- Consider opportunities for efficiency improvements in Licensing Actions and other key business processes through establishment of a centralized work planning and allocation process
- Identify standardized, clear processes
- Develop performance expectations for standardized processes

RECOMMENDATION: Create a Work Planning Center to leverage resources and manage processes.

NEXT STEPS:

- Benchmark utility companies to identify work planning center best practice processes and procedures for work control, number of FTE's, level of investment, planning, tracking methods, etc.
- Identify and document all NRR business processes, such as Licensing Actions, that could be enhanced by a Work Planning Center
- Define roles and responsibilities of the Work Planning Center, (i.e., creating administrative, analysis, urgent care and supervisory functions, assigning safety significance and complexity of work, and distributing work to the appropriate organization) and re-evaluate roles of other personnel, such as Project Managers and Branch / Section Chiefs that may be effected
- Develop a detailed operating plan and schedule for implementation
- Integrate appropriate workload management tools, intranet, or other information technology resources into the Work Planning Center

RECOMMENDATION: Adopt organizational competency-based, workforce planning.

NEXT STEPS:

- Evaluate NRR's current competency structure and its strategic and industry direction in meeting current and future work demands
- Identify gaps in competencies in the current workforce compared to organizational needs
- Determine and define NRR competencies at the organizational level that will best meet NRR's future business direction and will create an environment of high performance
- Evaluate the new NRR reorganization and structure to consider organizational competency based, workforce planning
- Analyze opportunities for analysis with information systems, such as, Enterprise Resource Planning Systems, skills databases or other automated systems to support competency development
- Implement and standardize basic training requirements, such as Introduction to Licensing Actions

RECOMMENDATION: Utilize a workload management tool that meets NRR's business needs.

NEXT STEPS:

- Coordinate current NRR information system initiatives
- Create a user's group or focus group to increase involvement in development or selection of new system
- Assess all current and pending systems to be implemented to ensure user needs
- Consider integrating information systems where possible
- Determine in detail NRR's workload management and reporting needs and the compatible funtionalities of RPS-LOP. Example functions to consider could include: logging work, routing work, tracking, status reporting, updating/editing, logging out/completion, planning and scheduling
- Further evaluate industry workload management packages that meets NRR's business needs

RECOMMENDATION: Emphasize knowledge management by developing an automated, centralized, accessible Intranet.

NEXT STEPS:

- Determine desired outcomes
- Assess where current information management tools lack information needs
- Identify information needs that would be most value-added on an intranet system
- Conduct focus groups to determine user needs and to determine scope of intranet information
- Benchmark industry intranets
- Determine what level of investment is feasible

RECOMMENDATION: Shape organizational values and beliefs around leveraging knowledge and resources for continuous improvement.

NEXT STEPS:

- NRR leadership should assess the current values and beliefs operating in the organization to obtain a clear picture of its culture and how business processes and knowledge sharing are conducted
- NRR leadership should attempt to influence and thereby change values and beliefs in the workplace to support knowledge sharing goals and strategies
- NRR leadership must clearly communicate its commitment to knowledge sharing in order to achieve a knowledge based, continuous improvement climate
- Examine the organizational and behavioral factors, such as personal networking, that may undermine implementation of knowledge sharing
- Designate knowledge initiative managers to manage, change, determine knowledge sharing needs

SECTION V: IMPLEMENTATION CHALLENGES AND BEST PRACTICE APPROACHES

As NRR proceeds with implementing the recommended strategies and next steps described earlier, it will face organizational and cultural challenges. Many of the efficiency observations address current key beliefs and values about how work is currently done at NRR. As NRR proceeds with implementing the recommended strategies and next steps described in this assessment, it must address the organizational and cultural challenges that may inhibit successful implementation.

The importance of correctly addressing the implementation challenges can be realized by noting that over half of all process improvement initiatives fail. One of the primary reasons for failure is that the organizational values and beliefs are not initially addressed as part of the redesign and implementation processes. Therefore, addressing the cultural and organizational obstacles within NRR is imperative, and becomes a key element in successful implementation of the efficiency recommendations. NRR also needs to be aware of the close scrutiny of its stakeholders during the efficiency initiative, and how the success or failure will impact the viability of future initiatives.

The implementation challenges are drawn from two main sources:

Source 1. Analysis of the observations, interviews, and strategies and recommendations Arthur Andersen presented in the Licensing Actions Assessment and the Workload Management Assessment.

Source 2. Responses and reactions to the recommendations collected from the focus groups and the Executive Team. Addressing these implementation challenges sooner will allow NRR to more effectively improve its business performance.

The potential implementation challenges presented below represent the primary organizational obstacles NRR will face throughout the transition process, as it moves towards achieving its Expected Outcome. The Potential Challenges have been classified according to the seven Efficiency Improvement Themes identified earlier, and matched with industry Best Practice Approaches. Further details on Best Practices for Implementation Challenges can be found in the Appendix. This framework shows the relationship between the key components of process improvement necessary for successful implementation.

Efficiency Improvement Theme	Potential Challenges	Best Practices	Expected Outcomes
Standardized Processes	• Wide variety of division and personal workload management methods • Heavy reliance on informal communication and networking to conduct business • The role and acceptance of the Workload Planning Center under NRR's new reorganization and structure • Intense stakeholder scrutiny into how NRR conducts its business • Implications of shifting to a risk-informed regulatory framework	• Reward progress through each phase of the transition. • Establish a plan with milestones and timelines that layout the revisions to Licensing Actions process and other key business processes	• Reduced process variability, clarification of process standards, improved consistency, introduction to best practices
Management Information Systems	• Management support and enforcement of a new tool is essential for success • Implementation and full utilization of a comprehensive workload management tool will require more than training - a cultural shift	• Provide training opportunities to encourage employees' professional growth and acclimation to workload management	• Provides basis for improved decision making, planning and knowledge sharing

Efficiency Improvement Theme	Potential Challenges	Best Practices	Expected Outcomes
Performance Measurement	• Employees feel threatened that organizational performance will translate into individual capability and performance measures • External pressures to implement performance measurement and monitoring systems from the Government Performance and Results Act (GPRA)	• Regularly monitor results through a performance measurement system ▪ Reward high performance on the same day of reaching a goal ▪ Establish clear goals, with appropriate, quantifiable measures, to track the progress of the transition	• Reinforced expectations and accountability for clearly defined results
Competency/Skills	• Minimal common training and or set of core skills common to all employees limits the ability of the Workload Management Center to effectively leverage resources • Organizational resistance to changing roles and responsibilities, specifically PM, SC, BC	• Identify change agents in NRR with excellent technical skills complemented by interpersonal skills to facilitate funneling work through the work planning center and to apply recommended process changes to Licensing Actions • Support change agents, such as those who worked with the Arthur Andersen Efficiency Assessment, through leadership training, positive reinforcement, and rewards • Provide training opportunities to encourage employees' professional growth and acclimation to the new approach to workload management	• Effective allocation of workload and full utilization and leverage of resources

Efficiency Improvement Theme	Potential Challenges	Best Practices	Expected Outcomes
Beliefs & Values	• Consciousness about current values and beliefs which have contributed to shaping current workload management processes (i.e. no mistakes, workload is unpredictable) • Internal resistance to changing roles and responsibilities • Continually improving business processes is a fundamental and drastic change which cannot be addressed solely by training	• Develop an implementation plan that instills purpose, interest and enthusiasm	• Risk-informed regulation" and other approaches that yield NRR the outcomes it desires
Knowledge Management	• Current methods of knowledge retention and management are personalized, without a formalized institutional memory	• Promote continuous communication and feedback at all levels	• Fully leverage NRR organizational experience and facilitates communication
Expectations & Accountabilities	• Accountability for project completion due dates is not enforceable through current methods • Intense scrutiny from stakeholders into how NRR conducts its business, NRR should focus on who its clients are and to whom it is accountable	• Involve NRR staff in creating the reward system through ingenuity contests, suggestion boxes and focus groups	• Clear, measurable performance expectations of staff and business units within NRR

SECTION VI: CURRENT INITIATIVES

While the efficiency assessments revealed potential opportunities, NRR has demonstrated its eagerness to improve and is already striving for more efficient operations. The Chairman's Tasking Memo resulted in appointment of a task force dedicated to RAIs, a major sub-process of Licensing Actions. They are exploring recommendations that will make the process more efficient. In addition, another task force has been communicating with industry and other stakeholders to find the best solutions.

NRR should be commended for launching three other initiatives, described in the matrix below, to learn more from industry and implement decisions made by the Executive Team. The initiatives address observations from the Licensing Actions and Workload Management Assessments and support efforts to improve agency-wide business performance. Their purpose, intended outcome, and corresponding theme are shown to demonstrate the contribution of each activity to NRR's efforts to become a performance-based organization.

Initiative	Purpose	Intended Outcome	Theme
Request for Additional Information (RAI) Task Force ▪ Created in response to the Chairman's Tasking memo. ▪ Incorporated observations and recommendations from the Licensing Actions assessment into its agenda. ▪ Team consists of key change agents within NRR.	▪ Work with industry to gain its cooperation in NRR's efforts to improve the Licensing Actions process. ▪ Identify ways to decrease the number of RAIs. ▪ Work with industry to reduce the number of RAIs issued to licensees.	▪ Reduce the cycle time of Licensing Actions by way of reducing the number of RAIs issued to licensees. ▪ NRR staff supports process change.	Standardized Processes Performance Measurement Values & Beliefs Expectations & Accountabilities Knowledge Management
Regional Workload Management and Information System Assessment ▪ Team focuses on developing more effective, user friendly technology to support workload management processes. ▪ Team consists of both NRR	▪ To assess agency workload planning and management requirements. ▪ To evaluate the various options for developing or procuring a set of automated tool(s) to facilitate workload planning and management.	▪ Increased efficiency in the way the regions identify, prioritize, assign, plan, schedule, and monitor work activities. ▪ Fully implemented agency-wide information system for workload management processes. ▪ NRR staff supports process change.	Standardized Processes Performance Measurement Management Information Systems Knowledge Management

business managers and technology experts.			
Initiative	**Purpose**	**Intended Outcome**	**Theme**
Industry Roundtable ▪ Sessions achieve high attendance by both NRR staff and industry representatives. ▪ Each side is both a careful listener and active participant as they discuss RAIs, amendment procedures, and other issues.	▪ To exchange best practices and lessons learned. ▪ To educate both NRR and licensees about each organizations business needs. ▪ To generate customer support of NRR's shift to a performance-based organization.	▪ Improved relationship with industry. ▪ Tool-kit of solutions to decrease cycle time for outputs. ▪ Improved transition to utility deregulation. ▪ NRR staff supports process change.	Performance Measurement Values & Beliefs Expectations & Accountabilities
Operating Plan Development Task Force ▪ Team incorporates effectiveness review findings ▪ Composed of change agents and recognized leaders within NRR	▪ To identify performance measures for mission critical activities ▪ To identify initiatives requiring "planning" and determine work needed to operationalize initiatives ▪ To establish consistent communication with Executive Team.	▪ A performance-based operating plan for NRR ▪ Executive Team supports the operating plan ▪ NRR staff buys into process change.	Performance Measurement Expectations & Accountabilities

While NRR should be recognized for its enthusiastic approach to improving the efficiency of its business processes, each initiative currently functions independently. To maximize the value of each initiative, the efforts should be integrated and better coordinated to ensure that each effort supports a common outcome.

SECTION VII : LESSONS LEARNED

As NRR conducts future assessments, several lessons can be learned from Arthur Andersen's application of the efficiency assessment methodology. Overall, the methodology was straightforward. The methodology helped to structure an overview of NRR's processes despite variability in business processes and workload metrics. The matrix below contains practices that worked especially well and others that, in hindsight, could have been improved upon. Tracking lessons learned is a valuable tool for helping assure the success of future efficiency improvement initiatives.

<table>
<tr><th>Successful Practices</th><th>Revisions</th></tr>
<tr><td>
Obtain a global perspective of the business process

Consult each branch
Interview several layers of management and staff within NRR
Interview several project managers
Collect data from people with various levels of experience

Clarify the purpose and desired outcome of each step and activity of the study.

Respect confidentiality.

Treat interviews as confidential
Treat sources of specific comments within focus groups as confidential.

Validate results.

Test out hypotheses with process participants
Show process maps to interviewees and other participants for comments and revisions

Build recommendations on the basis of best practices research.

Conduct benchmarking studies to learn how other organizations manage similar processes
Utilize internal experts and their experiences to build a best practices library

Ability to adjust scope of work.

Positive client interaction.
</td><td>
Quantify the efficiency study as much as possible.

Collect valid workload metrics
Conduct small-scale, quantitative surveys to validate qualitative data

Document assumptions.

Communicate and collaborate more regularly with the Executive Team and leadership.

Identify and communicate current initiatives early on to identify potential duplication of efforts.

Communicate assessment objectives throughout the organization to:

Lend credibility to the effort and to
Present the opportunity for staff participation

Consider stakeholders' perspectives to obtain a customer point of view and customer driven recommendations.
</td></tr>
</table>

SECTION VIII: CONCLUSION

The Efficiency Assessment observations, recommendations, next steps, and implementation challenges presented in this chapter present an overview of NRR current business operations and the challenges NRR faces as it seeks to improve efficiency. Detailed information regarding Licensing Actions and workload management processes are presented in Appendix E- Licensing Actions Report and Appendix F - Workload Management Report.

CHAPTER III. OPERATING PLAN

SECTION I: INTRODUCTION

The purpose of the operating plan section is to propose an approach and template that can be used throughout the agency to develop office operating plans. NRR is currently undertaking the specific work needed to use these proposed templates. The operating plan work currently underway at NRR builds upon the recommendations resulting from the assessment of the PBPM conducted in late 1998.

The term operating plan has been used for annual planning, budgeting, and performance reporting and monitoring. This section of the report discusses each of these components separately, consistent with the agency's PBPM process. The terms used in this section are planning, allocation of Resources to the planned work (budgeting), and performance reporting and monitoring.

The outputs of this work are a delineation of the various frameworks used including the description of the template, its purpose and a proposed process to populate each. Specific results of the NRR effort to date will be used to demonstrate the "draft" results of the work to date.

CONSIDERATIONS FOR THE OPERATING PLAN

NRR's leadership identified their expectations for development of the Operating Plan and the attendant performance reporting. Their expectations include:

- Satisfying external reporting requirements without being duplicative, including:
    - Strategic and Performance Plans
    - Tasking Memo progress tracking
    - Congressional requirements
    - GPRA reporting requirements.
- Integrating the Tasking Memo work into the operating planning
- Integrating the effectiveness work being conducted by the Executive Team
- Coordinating with NRC-wide processes for Planning, Budgeting, and Performance Management

PURPOSE, PRODUCTS, AND SUCCESS FACTORS FOR THE NRR OPERATING PLAN

Purpose:

- To ensure that everyone in NRR understands NRR's organizational objectives, is focused on the right work that is critical to the outcomes, and is doing what is expected of them so that NRR delivers the results expected.

Products:

A Plan that:

- Connects all work to outcomes, built from the top-down
- Establishes accountability for the work and the oversight of the work
- Establishes reporting requirements
- Facilitates continuous improvement

Critical success factors:

The NRR Plan Should
▪ Clarify goals, strategies, assumptions and direction for NRR staff
▪ Reinforce the direction and expectations by measuring the right things
▪ Reinforce the need for substantial improvement, both short and long term
▪ Measure the Critical Things to ensure focus on the leverages
▪ Demonstrate how NRR work contributes to outcomes
▪ Identifies roles and accountabilities for work and oversight
▪ Improve management oversight and confidence that the work is on track
▪ Facilitate timely decision making

DEFINITIONS

Goals - The four outcome arenas NRR has identified for success, in support of the strategic plan.

Vectors of change - The degree of change expected for each of the outcome arenas in the short term.

Measurable outcomes - The success criteria that NRR has drafted that defines success for the NRR Office.

Effectiveness template - The summary plan for the new, existing, and potential shed activities in the context of the measurable outcomes.

Policy guidance - The assumptions and high level plans that outline how NRR will think about its work in relationship to the measurable outcomes.

Operating Plan - The result of translating the new and critical ongoing work into a plan that will ensure success. This includes defining the performance measures at different levels of work required to assess progress to ensure success.

Planned accomplishment - The current term used by the NRC for areas of work requiring resources. (We recommend this be changed to work activity.)

Performance Reporting / Monitoring - The activity of reporting the progress on the critical measures developed in the operating plan. (We recommend that you separate the terms operating plan from reporting.) When necessary, plans will be revised as appropriate, but that is not necessarily quarterly. This activity includes the management oversight responsibility of assessing progress as part of a formal activity.

SECTION II: FY 2001 PLANNING CONTEXT FOR NRR

NRR'S GOALS FOR 1999 - 2002

The following section summarizes the goals and expected degree of change identified by NRR during the facilitated process. The goals and the expected degree of change informed the development of the effectiveness template and will be the foundation for the development of the operating plan.

1. **Maintain adequate safety margins**
   When the first goal is being accomplished, then

2. Reduce unnecessary regulatory burden
3. Improve public confidence in the NRC's ability to accomplish its other goals
4. Improve the effectiveness and efficiency of the way we regulate

The last three goals are listed in priority order and are subordinate to maintaining safety. They are prioritized in order of importance.

VECTORS OF CHANGE FOR EACH GOAL

Goal	Vector of Change
▪ Maintain adequate safety margins	▪ No change – Improvement is not required
▪ Reduce unnecessary regulatory burden	▪ Reduce substantially and quickly
▪ Increase public confidence	▪ Improve to some degree
▪ Increase internal effectiveness and efficiency in the way we regulate	▪ Improve substantially

NRR DRAFT MEASURABLE OUTCOMES
(Shown in Appendix D)

SECTION III: DEVELOPING THE OPERATING PLAN

DISCUSSION

The proposals in this section are based on:

- Detailed reviews of program plans within NRR, numerous interviews and informal discussions with both senior agency management and NRR managers and staff about operating plans, reporting, and performance management oversight,
- A review of best practices, and
- Operational experience with developing and implementing performance management.

Three component templates feed the development of the operating plan. Again, the operating plan is the plan of work necessary to deliver NRR's outcomes. Development of the Operating Plan occurs in two phases, completing the Effectiveness Assessment, and translating the effectiveness outputs into an Operating Plan. Also discussed is our proposed approach to develop policy guidance for budget development.

EFFECTIVENESS TEMPLATE

As discussed in the Effectiveness Chapter of this report, the effectiveness template summarizes the goals, success criteria for each goal, proposed new initiatives, ongoing work to sustain, areas to reduce resources, and proposed activities to shed or substantially reduce. When the effectiveness template is finalized, it will include the estimated resources required for each work activity, the rating of each activity as to its impact on each goal. The activities will also be prioritized high to low relative to their contribution to each NRR's. Preliminary results of the effectiveness assessment are presented in Appendix C: Kentland Results.

POLICY GUIDANCE FOR NRR

Discussion and Proposal – Since the policy guidance for NRR has not been developed, the following is a proposed approach for the current planning cycle. The policy guidance should

- Present the goal areas, vectors of change and success criteria from the effectiveness template
- Include the general assumptions about directional changes in the allocation of resources to various programs or activities that are assumed to be necessary to accomplish the changes outlined in the goals
- Include the high level assumptions about the major influences on the workload, like number of license renewals
- It should also include these activities under consideration for sun-setting or substantial reduction of resources for review by the Executive Committee and Commission.

This would provide the over-arching understanding of the expected change at more of a strategic level, without identifying exactly how many FTE would be allocated to any specific activity. While this is a substantive change from past policy guidance, the approach would be consistent with higher level reviews of the changes in outcomes expected, which is where we believe the EC and Commission should invest their time. It shifts the guidance process to an outcome orientation including a high level understanding of changes in focus and direction of resources.

SECTION IV: PROPOSAL TO DEVELOP THE OPERATING PLAN

BACKGROUND AND APPROACH

A fundamental assumption guides the amount of detail in the development of the operating plan. That is, degree of improvement should influence the degree of detail required in the operating plan. Greater need for change or improvement compels more detail to ensure completeness of thought and unity in execution of the work. The following chart outlines the thinking behind this premise.

Degree of change required	Improvement level terms	Description
30-60%	**Re-engineer** – This means rethinking the concepts of work required to deliver the outcomes.	Radical Improvement through rethinking the fundamental work required by changing the highest level business values
20-40%	**Improve** – This means fundamentally rethinking the work required to achieve the outcomes and redesigning the processes for the way work is done after determining its criticality to the outcomes.	Discontinuous Improvement through completing the effectiveness review
10-20%	**Optimize** – This means optimizing the current processes as designed and requires management to determine the sources of variation in any process and design the variability out using structured methods.	Continuous Improvement through upgrading processes to their optimal potential
5-10%	**Operate** – This means that the work is predictable and at generally acceptable levels of performance. It requires focus on execution of the work more consistently and uniformly by the operating staff to achieve ideal functioning.	Continuous Improvement through reduction of variability in the processes

After completing the effectiveness template, the steps required to develop the operating plan include the following:

- Develop the detailed plans for the initiatives that are at the improve level of change using the planning template (presented in detail in Appendix H).
- Develop purpose statements and success criteria for all other work.

Integrated Planning Model

	Plan	Monitor	Assess	Evaluate
NRC Strategic Plan	(14)			This box includes the NRC strategic performance measures
NRR Executive Level (4)	(2)	(3)	(5)	(1) This box includes the NRR success metrics as shown in the effectiveness template
NRR Management Level (8)	(6)	(7)	(9)	(3a)
NRR Operational Level (12)	(10)	(11)	(13)	(7a)

DISCUSSION OF THE TEMPLATE FOR THE INTEGRATED PLANNING MODEL

The Integrated Planning Model template is a model for developing integrated top-down plans driven by the desired outcomes. When it is completed, it includes a detailed plan for the work beginning at the top of the organization, in this case with NRR's Executive Team. Developing this template effectively relies on the effectiveness assessment results. The effectiveness template was developed in conjunction with this broader planning model.

DEFINITIONS

Plan – The direction setting process what needs to happen over time. Developing specifics directions.
Monitor – The "staying on the path" process that allows implementation of the planning. This requires identifying the signals, indicators, and limits to gauge deviation from the direction.
Assess – The reality checks that help maintain control in achieving the desired plans. Checks the current reality against the expected progress of the direction at a point in time. Ensures the organizational and individual capacity to stay on course and achieve the direction.
Evaluate – The testing of the whole (Plan, Monitor, and Assess) process to determine if the overall intent of the direction was achieved and, if not, what changes need to be made. Was the intent of the direction achieved? Was the shift in potential of people or processes achieved?

Completing the effectiveness template should accomplish the following:

- Identify the goals and success criteria for the organization
- Ensure that organizational leaders at the highest levels are aligned to the outcomes by creating a shared accountability for their success
- Identify the rate of change expected for a period of time
- Clarify what new work, ongoing activities, or other initiatives are necessary to facilitate the rate of change expected. Examples within NRR might include
  - Instituting changes to the oversight program
  - Risk informing the regulations
  - Improving the timeliness of licensing actions
  - Standardization of critical processes to ensure consistency and predictability
  - Identify what work is not critical to the success criteria and should be stopped or shed

Completing the balance of the Integrated Planning Model template should:

- Define what success is for each initiative. For example, what are the specific success criteria for the changes to the oversight program? Answering this question will ensure that everyone from the Commission to those involved in doing work have the same picture of the outcomes required when the work is completed.

  NOTE: The lack of success criteria for new initiatives is a problem that continues to challenge the agency. Another example is the effort to develop and implement the maintenance rule. Based on discussions and observations, there is not a common picture of exactly what was to change and how success was to be measured once implementation was complete. This is part of the organizational challenge of becoming outcome oriented.

- Build the top-down plans required to be successful and deliver the outcomes defined
- Clarify the accountability for the work, the performance metrics to be tracked in reporting, and the oversight of the work
- Build levels of accountability for work and management oversight into a formal process
- Define performance reports for the various levels shown, including strategic plan metrics, NRR executive level (performance plan), NRR management level, and NRR operational level so that there is a structure to reporting that ties all work up through the organization to the NRR goals and the strategic plan goals.
- Describe new initiatives needed to deliver substantial improvements as identified in the success metrics of the effectiveness template (these are included in the NRR Executive Level Evaluate Block of the model.)

Approach to populating the Integrated Planning Model template

1. Develop NRR's organizational goals and outcomes (should be connected to the strategic plan). [2]
2. Develop the new initiatives or critical activities that are necessary to deliver the outcomes. Develop the proposed work that should be stopped.[1]
3. Develop the success criteria for each of the critical initiatives in step 2. These monitor criteria define success for each initiative. The desire here is to define the critical few to monitor progress.[3] Once these are defined, the monitor block at the executive level becomes the outcome desired at the Management level. This is the key to integrating top-down planning. These need to be measurable just like the success criteria in step 1.
4. Identify who is accountable for each of the critical initiatives, as the champion of the effort.
5. Identify who will perform the assessment function at the Executive level. This should be the Executive Team of NRR and part of their work in the assessment box is to explain to the next higher level in the organization what actions are being taken when performance is out of standard. This should become part of standard performance reporting.
6. Once the success criteria are developed for (3a) the process repeats itself for the next level of detail through the organization. As a result, the question here is – what is the critical work required to deliver the outcomes as defined in block (3a)?
7. The next step repeats step (3) in defining the success factors for the work activities outlined in step 6. These criteria move to the evaluate block for the operational level.
8. Again the accountability for the specific work needs to be defined.
9. Delineation of whom is accountable for the assessment.
10. – 13. *These steps are the same as 6 – 9 above*.
14. After all of the detailed planning for all of the initiatives, the planning block must be totally integrated to understand if the expectations of various individuals or groups are reasonable, relative to balance of expectations across the organization. This work requires involvement of the entire leadership team and is one of the means to get management alignment to the overall plan.

This is an extremely challenging process to deliver because of the tremendous change in thinking, the development of appropriate metrics, and the ability to keep it as simple as possible. This activity is under way for NRR for 8 initiatives. [4]

One of the premises for this model is that the frequency of reporting builds from the top down. The example is that if the strategic measures are to be reported annually, NRR measures must be measured quarterly as a means of testing if the strategic level

[2] NRR ET completed this as a draft in the effectiveness review. Shown in appendix D.

[3] A draft of the progress to-date is included in Appendix G.

[4] Examples of the results to-date can be found in Appendix G

performance is on track. Each level of measure needs to be more frequent than the next higher level to allow time for course corrections without putting the ultimate outcome at risk.[5]

ONGOING INITIATIVES – PLANNING PROCESS

The final step in completing the operating plan is to take all the ongoing work that was not planned in detail and populating the following template. We will call this the activity template and it requires less detail because these activities are currently "ongoing ".

Activity List	Purpose of activity?	Who is accountable?	What do we need to monitor to ensure success?
Activity 1	i.e. What is the goal focus?		
Activity 2			
Activity 3 etc.			

Once the activity template is completed, the performance measures that were developed for each activity, as well as the planning model, are used to identify the performance reporting requirements. All proposed metrics should be evaluated to determine where they fit in the planning template and assess the completeness and balance of the metrics, while trying to consider the complexity of the measuring process. This might indicate that while the success criteria are good indicators, the leadership may decide not to try to measure some of them in the short term.

Considerations for inclusion in performance metrics:

In addition to the success metrics in the evaluate box on p. 49

- Budgeted and actual FTE and $ for all planned activities
- Labor rates, the productivity efficiency, of all critical activities
- Critical outputs, number and timing of license renewals
- Process standards for critical processes – targeted range of hours to complete
- Process variability tracking for critical processes, especially licensing actions
- Some quality measures, or rework factors

[5] Performance Management and Reporting are discussed in detail Appendix H

SECTION V: RECOMMENDATIONS

RECOMMENDATIONS

- Complete the aggressive schedule in NRR for development of the operating plan using this approach that has already begun and is being given high priority. Use the lessons learned before moving forward into other organizations with the detailed planning template.
- Develop lessons learned with the current effectiveness effort on the fast track with RES and NMSS.
- Consider a total revision of the performance reporting to the integrated report for NRR, versus the detailed program plans.
- Consider how to integrate all divisional management needs into the performance reporting to eliminate any duplicative efforts throughout NRR.
- Centralize performance tracking and reporting in NRR.
- Formalize the management reporting reviews through scheduled performance reviews at all level of NRR.
- Eliminate the description of work activities from periodic reporting. Put this information into a background document that everyone has access to, but do not include in the performance report.
- Consider the information shown in Appendix H before finalizing the FY 2001 operating plan.